

AMENDMENTS TO THE CLAIMS

1. **(Currently amended)** ~~Multi-layer~~ A multi-layer laminate for tubes and similar foil-type packaging ~~having comprising~~ comprising an embedded barrier layer (30), and a metal —especially aluminium— foil (60) ~~and optionally an outer structure, especially an outer and/or sealing film (70), characterised in that wherein~~ the barrier layer (30) consists of one or more, especially mixtures, of the following materials:

~~-polyamide (PA), especially aromatic and/or partly aromatic polyamide or mixtures thereof,~~

~~-mixtures of polyamide (PA), especially aromatic and/or partly aromatic polyamide or mixtures thereof, with ethylene vinyl alcohol copolymer (EVOH) and/or polyacrylonitrile (PAN),~~

~~-polyethylene terephthalate (PET),~~

~~-polyacrylonitrile (PAN).~~

2. **(Currently amended)** ~~Laminate~~ The laminate according to claim 1, ~~characterised in that wherein~~ the barrier layer (30) is arranged on the inside of the packaging, between an inner sealing or contact layer (10) and the metal foil or layer (60), ~~especially as part of an inner film (80).~~

3. **(Currently amended)** ~~Laminate~~ The laminate according to one of ~~claims~~ Claim 1 or 2, ~~characterised in that further comprising there is provided,~~ between the barrier layer (30) and the metal foil (60), a central sealing layer (40) and/or ~~an especially extruded a~~ connecting layer (50).

4. **(Currently amended)** ~~Laminate~~ The laminate according to Claim 1 ~~one of the preceding claims, characterised in that wherein~~ an adhesion promoter (20) is provided between the barrier layer (30) and ~~the layers surrounding the barrier layer (30), especially the inner sealing layer (10) and an outer layer.~~

5. **(Currently amended)** ~~Laminate~~ The laminate according to Claim 1 ~~one of the preceding claims, characterised in that wherein~~ the metal —especially aluminium— foil (60) is coated with a chromium-complex-comprising, ~~especially lacquer-like,~~ material.

6. **(Currently amended) Laminate** The laminate according to Claim 1 ~~one of the preceding claims, characterised in that wherein the particular layers present and their~~ have thicknesses are in accordance with the following table:

Layer	Layer thickness	Preferred layer thickness	Especially preferred layer thickness
Inner sealing or contact layer (10)	1 μ m – 250 μ m	3 μ m – 150 μ m	5 μ m – 100 μ m
Adhesion promoter (20)	1 μ m – 140 μ m	3 μ m – 40 μ m	5 μ m – 25 μ m
Barrier layer (30)	1 μ m – 180 μ m	2 μ m – 80 μ m	3 μ m – 50 μ m
Central sealing layer (40)	1 μ m – 250 μ m	3 μ m – 150 μ m	5 μ m – 100 μ m
Connecting layer (50)	1 μ m – 180 μ m	3 μ m – 80 μ m	5 μ m – 50 μ m
Metal foil (60)	1 μ m – 150 μ m	3 μ m – 65 μ m	5 μ m – 40 μ m
Outer structure (70)	1 μ m – 300 μ m	0 μ m – 190 μ m	0 μ m – 110 μ m

7. **(Currently amended) Laminate** The laminate according to Claim 1 ~~one of the preceding claims, characterised in that wherein the particular layers~~ comprise materials in accordance with the following table, in each case singly or in combination:

Layer	Material(s)
Inner sealing or contact layer (10)	Polyethylene (PE), polypropylene (PP), modified olefins, especially ionomers , ethylene acrylic acid (EAA), polyacrylonitrile (PAN), ethylene methacrylate (EMA), mixtures of afore-mentioned materials
Adhesion promoter (20)	Maleic anhydride (MA), modified olefins, especially ionomers , mixtures of afore-mentioned materials
Central sealing layer (40)	Polyethylene (PE), polypropylene (PP), modified olefins, especially ionomers , ethylene acrylic acid (EAA), polyacrylonitrile (PAN), ethylene methacrylate (EMA), mixtures of afore-mentioned materials
Connecting layer (50)	Ethylene acrylic acid (EAA), ethylene methacrylate (EMA), maleic anhydride (MA), modified olefins, especially ionomers , polyethylene (PE), mixtures of afore-mentioned materials
Outer structure (70)	Polyethylene (PE), polypropylene (PP), modified olefins, especially ionomers , ethylene acrylic acid (EAA), polyacrylonitrile (PAN), ethylene methacrylate (EMA), colorants, mixtures of afore-mentioned materials

8. **(Currently amended) Method** A method of producing a multi-layer laminate for tubes and similar foil-type packaging ~~having said laminate comprising an embedded barrier layer (30), a metal —especially aluminium— foil (60) and optionally an outer structure (70), especially an outer and/or sealing film (70), characterised in that wherein~~ as the barrier layer (30) there is used

~~-polyamide (PA), especially aromatic and/or partly aromatic polyamide or mixtures thereof,~~

~~-mixtures of polyamide (PA), especially aromatic and/or partly aromatic polyamide or mixtures thereof, with ethylene vinyl alcohol copolymer (EVOH) and/or polyacrylonitrile (PAN),~~

~~-polyethylene terephthalate (PET),~~

~~-polyacrylonitrile (PAN).~~

9. **(Currently amended) Method** The method according to claim 8, characterised in that wherein an inner film (80) consisting of at least a sealing or contact layer (10, 40) and the barrier layer (30) and at least one adhesion promoter (20) arranged between the barrier layer (30) and the sealing or contact layer (10, 40) is co-extruded.

10. **(Currently amended) Method** The method according to claim 8, characterised in that wherein the barrier layer (30) is produced in the form of a film and applied to an inner sealing or contact layer (10) by means of extrusion lamination or adhesive lamination.

11. **(Currently amended) Method** The method according to claim 8, characterised in that wherein the an inner sealing or contact layer (10), and the barrier layer (30) and, optionally, a central sealing or contact layer (40) are applied directly onto the metal layer (60), where appropriate using an adhesion promoter (20), ~~especially a primer, preferably a methacrylate.~~

12. **(Currently amended) Method** The method according to Claim 8 ~~one of claims 8 to 11~~, characterised in that wherein the metal ~~especially aluminium~~ foil (60) is coated with a chromium-complex-comprising, ~~especially lacquer-like,~~ material.

13. **(Currently amended) Method** The method according to ~~one of claims~~ Claim 8 to 12, characterised in that wherein the particular layers are produced having and thicknesses thereof are in accordance with the following table:

Layer	Layer thickness	Preferred layer thickness	Especially preferred layer thickness
Inner sealing or contact layer (10)	1 μm – 250 μm	3 μm – 150 μm	5 μm – 100 μm
Adhesion promoter (20)	1 μm – 140 μm	3 μm – 40 μm	5 μm – 25 μm
Barrier layer (30)	1 μm – 180 μm	2 μm – 80 μm	3 μm – 50 μm
Central sealing layer (40)	1 μm – 250 μm	3 μm – 150 μm	5 μm – 100 μm
Connecting layer (50)	1 μm – 180 μm	3 μm – 80 μm	5 μm – 50 μm
Metal foil (60)	1 μm – 150 μm	3 μm – 65 μm	5 μm – 40 μm
Outer structure (70)	1 μm – 300 μm	0 μm – 190 μm	0 μm – 110 μm

14. **(Currently amended)** Method The method according to one of claims Claim 8 to 13, characterised in that wherein the particular layers are produced with materials in accordance with the following table:

Layer	Material(s)
Inner sealing or contact layer (10)	Polyethylene (PE), polypropylene (PP), modified olefins, especially ionomers, ethylene acrylic acid (EAA), polyacrylonitrile (PAN), ethylene methacrylate (EMA), mixtures of afore-mentioned materials
Adhesion promoter (20)	Maleic anhydride (MA), modified olefins, especially ionomers, mixtures of afore-mentioned materials
Central sealing layer (40)	Polyethylene (PE), polypropylene (PP), modified olefins, especially ionomers, ethylene acrylic acid (EAA), polyacrylonitrile (PAN), ethylene methacrylate (EMA), mixtures of afore-mentioned materials
Connecting layer (50)	Ethylene acrylic acid (EAA), ethylene methacrylate (EMA), maleic anhydride (MA), modified olefins, especially ionomers, polyethylene (PE), mixtures of afore-mentioned materials
Outer structure (70)	Polyethylene (PE), polypropylene (PP), modified olefins, especially ionomers, ethylene acrylic acid (EAA), polyacrylonitrile (PAN), ethylene methacrylate (EMA), colorants, mixtures of afore-mentioned materials

15. **(New)** The laminate of Claim 1, wherein the metal foil is an aluminium foil.

16. **(New)** The laminate of Claim 1, further comprising an outer structure comprising an outer and/or sealing film.

17. **(New)** The laminate of Claim 1, wherein the barrier layer comprises polyamide, said polyamide being aromatic and/or partly aromatic polyamide or a mixture thereof.

18. **(New)** The laminate of Claim 1, wherein the barrier layer consists of a mixture of one or more of said materials.

19. (New) The laminate of Claim 1, wherein layer thicknesses are in accordance with the following table:

Layer	Layer thickness
Inner sealing or contact layer	3 μm – 150 μm
Adhesion promoter	3 μm – 40 μm
Barrier layer	2 μm – 80 μm
Central sealing layer	3 μm – 150 μm
Connecting layer	3 μm – 80 μm
Metal foil	3 μm – 65 μm
Outer structure	0 μm – 190 μm

20. (New) The laminate of Claim 1, wherein layer thicknesses are in accordance with the following table:

Layer	Layer thickness
Inner sealing or contact layer	5 μm – 100 μm
Adhesion promoter	5 μm – 25 μm
Barrier layer	3 μm – 50 μm
Central sealing layer	5 μm – 100 μm
Connecting layer	5 μm – 50 μm
Metal foil	5 μm – 40 μm
Outer structure	0 μm – 110 μm

21. (New) The laminate of Claim 2, wherein the barrier layer is part of an inner film.

22. (New) The laminate of Claim 3, wherein the connecting layer, where present, is an extruded layer.

23. (New) The laminate of Claim 4, further comprising an adhesion promoter between the barrier layer and the inner sealing layer and an outer layer.

24. (New) The laminate of Claim 5, wherein said chromium-complex-comprising material is laquer-like.

25. (New) The laminate of Claim 7, wherein said modified olefins are ionomers.

26. (New) The method of Claim 8, wherein the metal foil is an aluminium foil.

27. (New) The method of Claim 8, wherein said multi-layer laminate further comprises an outer structure comprising an outer and/or sealing film.

28. (New) The method of Claim 8, wherein the barrier layer comprises polyamide, said polyamide being aromatic and/or partly aromatic polyamide or a mixture thereof.

29. (New) The method of Claim 8, wherein the adhesion promoter is a primer.

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30. (New) The method of Claim 8, wherein the adhesion promoter is a methacrylate.

31. (New) The method of Claim 8, wherein layer thicknesses are in accordance with the following table:

Layer	Layer thickness
Inner sealing or contact layer	3 μm – 150 μm
Adhesion promoter	3 μm – 40 μm
Barrier layer	2 μm – 80 μm
Central sealing layer	3 μm – 150 μm
Connecting layer	3 μm – 80 μm
Metal foil	3 μm – 65 μm
Outer structure	0 μm – 190 μm

32. (New) The method of Claim 8, wherein layer thicknesses are in accordance with the following table:

Layer	Layer thickness
Inner sealing or contact layer	5 μm – 100 μm
Adhesion promoter	5 μm – 25 μm
Barrier layer	3 μm – 50 μm
Central sealing layer	5 μm – 100 μm
Connecting layer	5 μm – 50 μm
Metal foil	5 μm – 40 μm
Outer structure	0 μm – 110 μm

33. (New) The method of Claim 12, wherein said chromium-complex-comprising material is laquer-like.

34. (New) The method of Claim 14, wherein said modified olefins are ionomers.